

# Devastating Floods are a Historic and Ongoing Problem for the National Mall



1889

Photo courtesy Library of Congress

For example . . .



1930

Photo courtesy Library of Congress



Photo courtesy Library of Congress

1942 East Potomac Park and the Jefferson Memorial



Photo courtesy Library of Congress

**1985** East Potomac Park with the Washington Monument in the distance

In fact, Washington has two separate flood threats: river flooding and stormwater flooding



Potomac River flooding has inundated, clockwise from upper left, Pennsylvania Avenue at 6<sup>th</sup> Street NW in 1889, the Navy Yard in 1936, East Potomac Park (before the Jefferson Memorial) in 1936, and Washington Harbour in Georgetown in 2010



Image courtesy Arthur Cotton Moore

The stormwater flood of 2006, by contrast, was caused by runoff from heavy rains on higher ground into this lowest lying part of the city along Constitution Avenue.



This "interior" flooding caused millions of dollars in damage to, clockwise from upper left, federal office buildings, the Department of Justice, the basement theater in the National Archives, and the 12<sup>th</sup> Street tunnel under the Mall

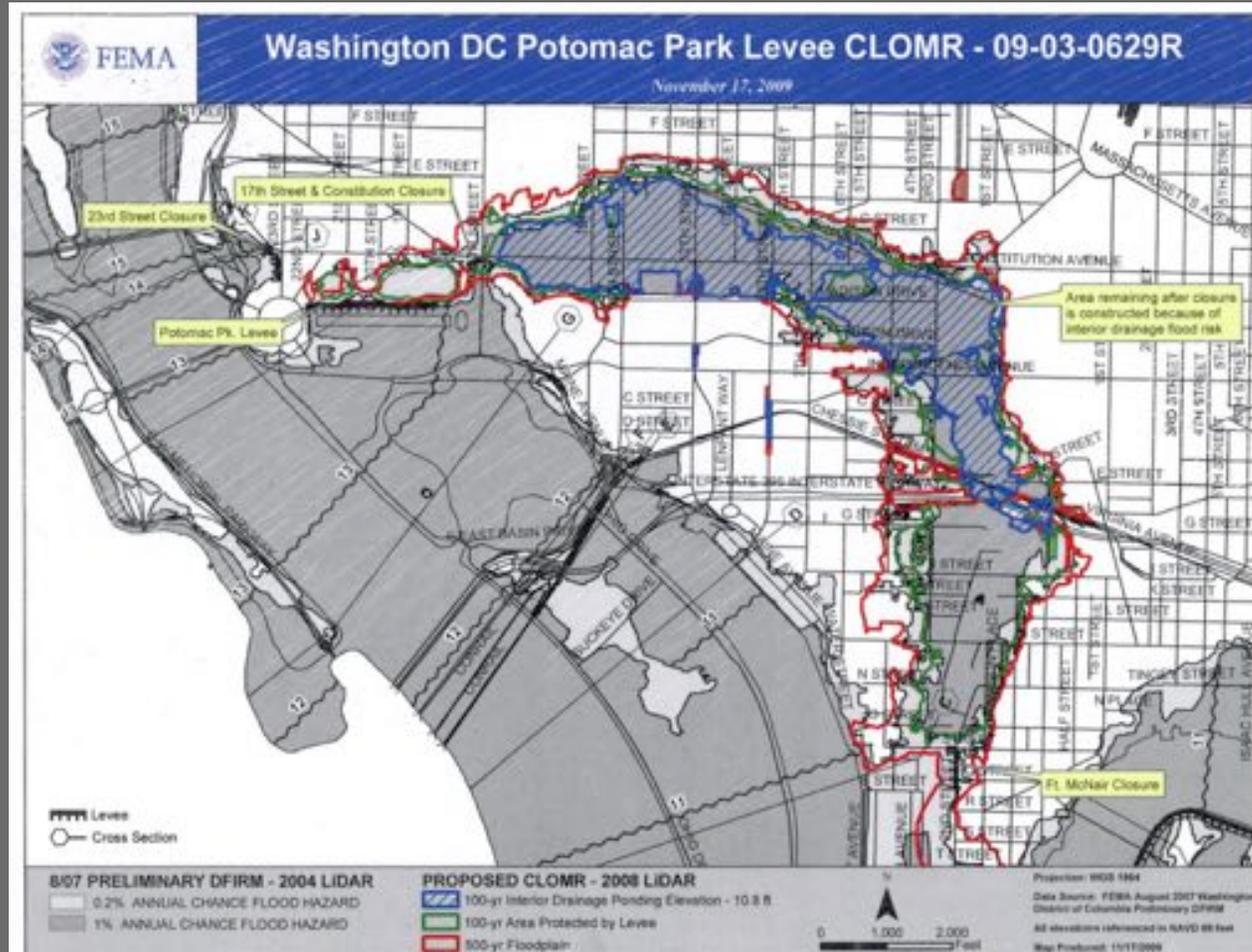
These flooding problems are the result of Washington's topography and changes made to rivers and streams over the years



This 1793 topographic map by Andrew Ellicott shows the site chosen for the nation's capital at the confluence of the Potomac and Anacostia (Eastern Branch) Rivers with a broad creek – Tiber Creek – wending its way along the Mall area from the Capitol to the Potomac



A satellite view of modern Washington superimposed on Ellicott's 1793 topographic map shows Tiber Creek (now covered by Constitution Avenue) and the original shorelines of the Potomac and Anacostia (outlined in black). The Lincoln and Jefferson Memorials, and other waterfront areas, are built on landfill created in the late 19<sup>th</sup> century by the Army Corps of Engineers.



FEMA issued new flood maps for Washington after Hurricane Katrina in 2005, prompting DC and federal officials to address the Potomac River flooding of Downtown DC issue by constructing a levee at 17<sup>th</sup> Street and Constitution Avenue. This diagram illustrates that while the levee may prevent Potomac River flooding (the area outlined in red), it will not address the separate interior stormwater flooding problem. Even with the levee in place, the area hatched in blue will be subject to flooding such as the 2006 floods.



No government action has been taken to address the ongoing stormwater flooding threat by implementing the recommendations of the 2011 Federal Triangle Stormwater Drainage Study sponsored by DC Water and the National Capital Planning Commission. Lacking a plan, Metro officials use sandbags to protect the Metro system from stormwater flooding.

NOAA Technical Report NDS CO-OPS 073

### Sea Level Rise and Nuisance Flood Frequency Changes around the United States



City: Seattle; Image: Shutterstock; Photo Credit: Amy McQueen

Silver Spring, Maryland  
June 2014



**noaa** National Oceanic and Atmospheric Administration  
U.S. DEPARTMENT OF COMMERCE  
National Ocean Service  
Center for Operational Oceanographic Products and Services

### Federal Triangle Stormwater Drainage Study

July 2011



PROPERTY OF THE UNITED STATES GOVERNMENT  
COPYING, DISSEMINATION, OR DISTRIBUTION OF THIS  
REPORT TO UNAUTHORIZED PERSONS IS PROHIBITED  
Do not remove this notice  
Properly destroy documents when no longer needed



### Flood Mitigation and Prevention Draft Study

GSA FEDERAL TRIANGLE BUILDINGS  
WASHINGTON, DC

INTERNAL REVENUE SERVICE  
DEPARTMENT OF JUSTICE  
DEPARTMENT OF COMMERCE  
OLD POST OFFICE ANNEX

January 23, 2007

General Services Administration  
National Capital Region  
Washington, D.C.

SP Setty & Associates, Ltd.  
S&A No. 02-06

PROPERTY OF THE UNITED STATES GOVERNMENT  
FOR OFFICIAL USE ONLY  
Do not remove this notice  
Properly destroy documents when no longer needed

### Companion Report Federal Triangle Stormwater Drainage Study

October 2011  
By the Federal Triangle Stormwater Study Working Group



### Report on Flooding and Stormwater in Washington, DC



JANUARY 2008

NCPC National Capital Planning Commission | 407 7th Street, NE, Suite 500, Washington, DC 20002 | 202.462.7200 | www.ncpc.gov



### National Capital Region Flood Risk Assessment: Inter-university Collaboration Initiative

Final Report

Submitted to the  
DISTRICT OF COLUMBIA WATER RESOURCES RESEARCH INSTITUTE

By:

Pradeep Bhatia, Ph.D.  
Associate Research Professor  
University of the District of Columbia

May 2012

Washington's flood threats continue to be well documented in recent government and private studies but no comprehensive plan has been developed

The National Mall Coalition has proposed a way to implement the 2011 recommendations for a floodwater reservoir under the National Mall while also solving other Mall problems that will make the Mall more welcoming, lively, and resilient – the National Mall Underground.

We welcome your comments and collaboration in developing this project.

Visit <http://www.nationalmallcoalition.org/innovation/resilience-to-ensure-the-future/>

Copyright 2016 National Mall Coalition  
[www.nationalmallcoalition.org](http://www.nationalmallcoalition.org)